

SUPPORTING DIRECTORY-BASED CACHE COHERENCE IN AN OBJECT-ADDRESSED MEMORY HIERARCHY

ABSTRACT

One embodiment of the present invention provides a system that supports directory-based cache coherence in an object-addressed memory hierarchy in a computer system. During operation, the system receives a cache-coherence transaction for a cache line. If the cache line is an object-addressed cache line, the system uses a corresponding object identifier and offset to look up directory information specifying where copies of the object-addressed cache line are located in the caches in the computer system. Next, the system uses the directory information to perform the cache-coherence transaction.